

Appl. No. : 10/069,441  
Filed : June 4, 2002

# AMENDMENTS TO THE CLAIMS

1. (Original) A rapid method of measuring complex carbohydrates in mammalian tissue, said method comprising the steps of:

- (a) extracting a sample of tissue to be tested;
- (b) forming a homogenous slurry of the sample with an aqueous solution;
- (c) adding sufficient hydrolysing enzyme for ensuring complete hydrolysis of glycogen in the slurry; and
- (d) measuring the concentration of glucose in the slurry.

2. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in~~ according to claim 1 wherein said method is performed in less than 30 minutes.

3. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in either~~ according to claim 1 or claim 2 wherein said complex carbohydrate is selected from the group consisting of glycogen, lactate and a combination of these.

4. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said aqueous solvent is water.

5. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said aqueous solvent includes at least one agent to ~~standardise~~ standardize ionic conditions ~~obtaining~~ for the method.

6. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein the formation of the homogenous slurry is effected with an apparatus selected from the group consisting of[:], a high speed homogeniser[:], a low speed homogeniser, and an ultrasonic apparatus.

7. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said hydrolysing enzyme is selected from the group consisting of[:], amyloglucosidase[:],  $\alpha$ -amylase[:],  $\alpha$ -glucosidase, and a combination thereof.

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8. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in~~ according to claim 7 wherein said hydrolysing enzyme is amyloglucosidase which is in a form selected from the group consisting of ~~[[:]]~~ a powder~~[[:]]~~, a liquid suspension~~[[:]]~~, and a solution.

9. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said method further comprises a step (e): measuring the concentration of lactate in the sample.

10. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein steps (b) and (c) are performed simultaneously.

11. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of claims 1 to 9~~ according to claim 1 wherein steps (c) and (d) are performed simultaneously.

16. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said glycogen measurement is effected by use of at least one sensors which incorporate each sensor incorporating said hydrolysing enzyme and glucose oxidase.

18. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said method is carried out at room temperature.

19. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims~~ according to claim 1 wherein said method is performed post-mortem, providing a measurement of concentrations of complex carbohydrates at the time of death.

20. (Currently amended) A rapid method of measuring complex carbohydrates as ~~claimed in~~ according to claim 19 wherein said ~~method is performed wherein said measurement is~~ up to half an hour after slaughter.

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21. (Currently amended) ~~Measurement of~~ A method of measuring ultimate pH by use of ~~comprising~~ the method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims according to claim 1~~ wherein said tissue is meat.

22. (Currently amended) ~~Measurement of~~ A method of measuring ultimate pH by use of ~~comprising~~ the method of measuring complex carbohydrates as ~~claimed in any one of the preceding claims according to claim 1~~ wherein said tissue is muscle.

23. (Currently amended) ~~Measurement of~~ A method of measuring ultimate pH by use of ~~the method of measuring complex carbohydrates as claimed in~~ according to claim 22 wherein said muscle is selected from the group consisting of ~~the group consisting of~~ the longissimus lumborum, gluteus medius, semitendinosus, and longissimus lumborum muscles.

24. (New) A rapid method of measuring complex carbohydrates according to claim 2 wherein said complex carbohydrate is selected from the group consisting of glycogen, lactate and a combination of these.

25. (New) A rapid method of measuring complex carbohydrates according to claim 3 wherein said hydrolysing enzyme is selected from the group consisting of amyloglucosidase,  $\alpha$ -amylase,  $\alpha$ -glucosidase, and a combination thereof.

26. (New) A rapid method of measuring complex carbohydrates according to claim 25 wherein said hydrolysing enzyme is amyloglucosidase which is in a form selected from the group consisting of a powder, a liquid suspension, and a solution.

27. (New) A rapid method of measuring complex carbohydrates according to claim 25 wherein said glycogen measurement is effected by use of at least one sensor, each sensor incorporating said hydrolysing enzyme and glucose oxidase.

28. (New) A rapid method of measuring complex carbohydrates as claimed in claim 27 in which said sensor further comprises lactate oxidase.

29. (New) A method of measuring ultimate pH comprising the method of measuring complex carbohydrates according to claim 9 wherein said tissue is meat.

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30. (New) A method of measuring ultimate pH comprising the method of measuring complex carbohydrates according to claim 9 in which said tissue is muscle.

31. (New) A method of measuring ultimate pH comprising the method of measuring complex carbohydrates according to claim 30 wherein said muscle is selected from the group consisting of *longissimus lumborum*, *gluteus medius*, *semitendinosus*, and *longissimus lumborum* muscles.